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## Don't be Afraid of Failure

By Michael Bass UCF Forum columnist Thursday, February 4, 2016

Many people have written on the fear of failure. In many places it goes under the heading "fear of losing face." I have visited several major laboratories and universities in Japan and China and come away with an uncanny feeling that in many instances they are held back by this fear.

Just one example will serve to show you what I mean. In late spring of 1960, Hughes Aircraft engineer and physicist Theodore Maiman demonstrated the first laser. It was a very simple affair in which a spiral flashlamp was used to excite chromium ions in a rod-shaped sapphire crystal with polished, parallel and silver-coated end faces. It was a flashlamp-pumped ruby laser.

By the time I began working with a laser in the spring of 1961 at least one company was selling a commercial version of Maiman's laser. This very simple device was enabling the birth of modern optics.

Meanwhile in China, at the premier optics institute in the country, it took over a year to prepare their first version of Maiman's laser. I could not find out if it had ever been used in a scientific experiment. It is now on display at the institute and it is clear why it took so long to prepare it. The laser has every adjustment conceivable and is machined beautifully. It is what we would call over-engineered. This means that the builders didn't understand that a flashlamp-pumped ruby laser did not have to be so complex and rather than risk failure they put in every possible way to avoid it.

Unfortunately, China's Great Leap Forward economic and social campaign in the late 50s and early 60s devastated science in that country so it wasn't until the 1980s when the vast potential of its scientists could begin to express itself. That period and the tradition of fear of losing face seem to make scientists in China risk averse. It is too bad

because they now have outstanding facilities and a great pool of talent that can be developed.

The United States is a country of risk takers. Often the risks fail but when they don't you find Apple, Microsoft, Google, FedEx, Uber and so on. Don't stop taking risks.

On a much smaller scale I can tell you about my son who became fed up with working in corporate America. He wanted to be his own boss.

About 19 years ago he quit his job and started a small magazine in Atlanta for the business and upscale traveler. It was never easy but he made it work. This magazine is now in Atlanta and Chicago and supports my son and his family.

He became known to the Kennesaw State University Business College and now is an adjunct professor in sales and marketing. Recently he started a consulting company. All of these efforts involve risk. But risk not taken is achievement never savored.

This fear of failure is still present in many places around the world. It can be seen in beautiful, clean, neat laboratories where not much is getting done.

My thesis advisor once told me that in such a laboratory it was painfully clear why nothing was getting done. Everyone there was too busy keeping the lab clean and the tools put away. That is not to say that laboratories should be a mess but they are places where ideas are tried out and some degree of disorder goes with that.

Another way that fear of risk becomes painfully evident is in the classroom when students don't ask questions. There are reasons for this. One is that the instructor is so fantastically brilliant and the material was presented so clearly that there is no need to ask questions. That is never true.

Another is that the students don't want to ask questions because they haven't been paying attention. This is always true of some students in any class.

Then there are those students who were paying attention and who are curious about something but won't ask a question because they are afraid of appearing to be ignorant in front of their fellow classmates and the instructor.

For such students I have the following comment: Which would you rather do: Ask a question and possibly appear ignorant or not ask a question and remain ignorant? The choice is yours.

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